Molecular Dimensions Limited

Cooled Crystallisation Incubators

FOR PROTEIN CRYSTAL GROWTH

Molecular Dimensions Limited

Left: 180 litre (model MD5-03)
Centre: 250 litre (model MD5-02)
Right: 390 litre (model MD5-01)

The only temperature controlled cabinets specifically designed for **crystal growth.**

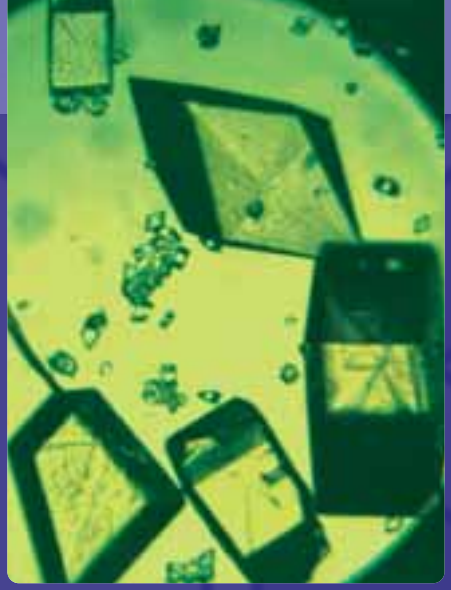
Molecular Dimensions Cooled Crystallisation Incubators are an economical alternative to building temperature controlled rooms, and provide much more precise control of crystal growth temperature.

Commissioned by a leading protein structure laboratory in England, Rubarth Apparate GmbH, the manufacturers, have produced four superb incubator cabinets for protein crystal growth. All have temperature programing, and can be further customised with accessories such as lighting, glazed door, extra shelves, instrument cable ports and humidity control.

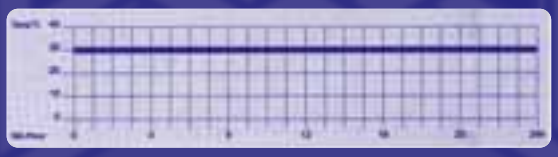
These incubators need only a small floor space. They have a white interior with easily-cleaned plastic-coated wire shelves, adjustable at 35mm intervals to provide maximum flexibility of positioning. Temperature control is via an electronic controller with digital display, over/under temperature safety cut-outs and warning alarms. The doors are lockable and have a magnetic seal.

The large work space door can be opened wide to provide full-width access. (Glass doors are available as an option.) Particularly efficient temperature insulation is ensured by high quality, CFC-free poly-urethane foam, enabling the pre-set temperature to be maintained with minimum energy expenditure.

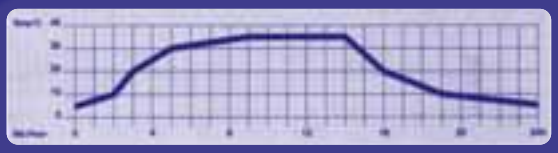
- 100, 180, 250, and 390 litre models
- Temperature range 0°C to 50°C
- Temperature accuracy ± 0.5°C for precise crystal growth conditions
- Virtually vibration free for undisturbed experiments
- Easy-to-use control panel
- Small foot-print maximises precious floor space in the laboratory



- Manufactured in Germany to demanding standards
- Remarkable temperature control
- Virtually vibration free
- Customisable to suit even the most demanding of laboratory applications



Single set-point



70 stage program control

Control panel

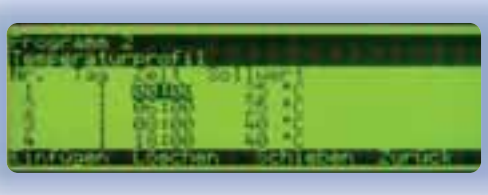
Precise and constant temperature

Temperature is controlled electronically. A continuously-running fan guarantees high accuracy of temperature control throughout the cabinet interior and over time, according to DIN-58945.

Heating and cooling

The continuously adjustable fan-mounted electrical resistance heater has low thermal "drag". It is controlled by a solid-state relay, avoiding steps and relay contact breaking. This design provides maximal accuracy of temperature with "coasting" practically eliminated.

The air-cooled refrigeration unit uses CFC-free refrigerant and has a highly efficient heat exchanger. Solenoid valve-bypass operation ensures smooth and continuous running, with minimal vibration.



Easy-to-use, programable temperature control

A temperature program controller allowing up to 70 set points is fitted as standard. Programing is simple, with a clear digital display of set and actual temperature. Both real time and process time controlled dual set-point temperature programs are available. Set point values or a freely programable ramp function can be selected.

Double security for samples and incubator

The incubators cannot over-heat or over-cool. In the event of a failure, a standby controller with a separate sensor takes over temperature control. Additionally an alarm is sounded.
A mechanical safety switch with factory-adjusted release temperature (TWB DIN12880, class 2) protects the incubator against incorrect adjustment of the temperature selector.

Easy-to-clean, flexible interior

The interior is made from shock-resistant plastic, with smooth surfaces and rounded corners that are easy to clean. The narrow spacing of the shelf supports offers maximum flexibility in positioning.

This series of precision-cooled incubators can be customised for highly specialised applications to include: lighting (including different wavelengths and various options including programable), humidifier or serial interface.

The incubators can be remotely monitored through a standard RS232 interface. A serial (RS485) interface is available as an option for computer control of up to 32 units. Software options are available for data logging, program management, time stamped messages and alarms.

250 litre (model MD5-02), fitted with lighting, humidifier and glass door

Specifications

Work space	MD5-04	MD5-03	MD5-02	MD5-01
Standard minimum temperature	±0°C	±0°C	±0°C	±0°C
Standard maximum temperature	+ 50°C	+ 50°C	+ 50°C	+ 50°C
Temperature regulation	±0.5°C	±0.5°C	±0.5°C	±0.5°C
Volume (Litres)	100	180	250	390
Volume (cubic feet)	3.53	6.36	8.83	13.77
Height (mm)	550	870	1230	1150
Width (mm)	520	520	520	650
Depth (mm)	440	440	440	555
Exterior finish	White-lacquered, zinc-plated sheet steel			
Interior surface	Easy-to-clean white plastic			
Number of shelves (standard configuration)	2	2	3	3
Maximum load per shelf (kg)	40	40	40	50
Cabinet				
Height (mm)	1130	1440	1810	1725
Width (mm)	610	610	610	760
Depth (mm)	640	640	640	750
Electrical power supply options (V/Hz)	230/50	230/50	230/50	230/50
Electrical power supply options (V/Hz)	110/60	110/60	110/60	110/60
Net weight (standard configuration) (kg)	60	60	75	90

Options and Ordering Information

Description	MD5-04	MD5-03	MD5-02	MD5-01
	Part Number			
Additional shelf	3010	3010	3110	3210
Additional shelf for lighting 1 x 20W	–	3011	3111	3211
Lighting 1 x 20W	–	3021	3121	3221
Continuous light intensity control for 1 x 20W	–	3031	3131	3231
Additional shelf for lighting 2 x 20W	–	–	3112	3212
Lighting 2 x 20W		–	3122	3222
Continuous light intensity control for 2 x 20W	–	–	3132	3232
Glazed door	–	3041	3141	3241
Humidifier (evaporative)	–	3061	3161	3261
Work space electrical outlet	3910	3910	3910	3910
Cable port (20 mm)	3915	3915	3915	3915
Cable port (45mm)	3916	3916	3916	3916
Duration timer	3930	3930	3930	3930

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